DOCUMENT RESUME

ED 208 377 CS 006 330

AUTHOR Kirby, Patricia Denson
TITLE An Investigation of Some Factors Affecting the Relationship of Listening Dependency to Reading Dependency of Sixth Grade Students.
PUB DATE 81
NOTE 22p.; Paper presented at the Annual Meeting of the International Reading Association (26th, New Orleans, LA, April 27-May 1, 1981).

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Cognitive Ability; Grade 6; Intelligence; Intermediate Grades; *Listening Comprehension; *Psycholinguistics; *Reading Comprehension; Reading Instruction; *Reading Research; *Receptive Language; Socioeconomic Status; Speech Skills; Writing Skills

ABSTRACT

A study was undertaken to determine (1) the relationship between listening and reading (the receptive language mode) and (2) the relationship of listening and reading to speaking and writing (the generative mode), intellectual ability, self-concept, impulsivity/reflectivity, and socioeconomic status (SES). Sixty grade six students were administered listening and reading comprehension, impulsivity/reflectivity, and self-concept measures. Their socioeconomic status and intelligence level were determined by school records. The students also completed spoken and written language tasks. Statistical analysis indicated that a significant relationship existed between intellectual ability and the receptive language mode. Correlation analysis indicated that no significant relationship existed between receptive language and generative language; that reading, intellectual ability, impulsivity/reflectivity, and SES were significantly related to listening; and that reading was significantly related to listening, intellectual ability, and impulsivity/reflectivity. (FL)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED208377

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

Patricia Denson Kirby
University of Southern Mississippi
Teacher Corps
Southern Station Box 10005
Hattiesburg, MS 39401

AN INVESTIGATION OF SOME FACTORS AFFECTING THE RELATIONSHIP OF LISTENING DEPENDENCY TO READING DEPENDENCY OF SIXTH GRADE STUDENTS

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Patricia Denson Kirby

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

INTERNATIONAL READING ASSOCIATION
FACTORS AFFECTING COMPREHENSION
Research Reports 6

CS006330

SUMMARY

AN INVESTIGATION OF SOME FACTORS AFFECTING THE RELATIONSHIP OF LISTENING DEPENDENCY TO READING DEPENDENCY OF SIXTH GRADE STUDENTS

This study investigated the relationships between receptive language mode expressed as a listening-dependency or a reading-dependency to the variables of spoken and written generative language, intellectual ability, self-concept, impulsivity-reflectivity, and socioeconomic status (SES). Subjects were 60 sixth-grade students.

The results of statistical analysis indicated that a significant relationship ($p < .05$) existed between intellectual ability and receptive language mode. A listening-to-reading ratio score expressed in decimal form and indicating a dependency in listening or in reading was determined to be inadequate for use as a criterion variable. Correlation analysis indicated that no significant relationship existed between receptive language and generative language. Reading, intellectual ability, impulsive-reflective (I-R) classification (as measured by time and error scores) as well as SES were significantly related to listening. Reading also was significantly

related to receptive language mode, intellectual ability, I-R classification and time and error scores. Mean reading comprehension scores were significantly higher than were scores on listening comprehension.

Educational implications derived from the results of the study include the following:

1. The inclusion of instruction in listening skills, particularly for those students whose reading skills have not yet reached the desired level of competence.

2. Continued use of flexible grouping procedures when planning for students with a wide range of intellectual ability.

AN INVESTIGATION OF SOME FACTORS AFFECTING THE RELATIONSHIP OF LISTENING DEPENDENCY TO READING DEPENDENCY OF SIXTH GRADE STUDENTS

The nature of language has been the focus of a considerable body of research, and numerous models for describing language were developed. One such model used by Harris and Sipay (1979) separated language into two forms, oral and written. Oral language involved listening and speaking; written language involved reading and writing. Listening and reading were further described as receptive language modes of communication, whereas speaking and writing were considered to be productive or generative modes (Cazden, 1980).

The interrelations between these varied facets of language have often claimed the attention of researchers (Durrell, 1969; Loban, 1963; Lundsteen, 1971; Ruddell, 1974; Strickland, 1962). The findings of these studies generally agreed with Loban's (1963) conclusion that listening, speaking, reading, and writing showed a positive relationship. He further stated that "competence in a spoken language appeared to be a necessary base for competence in writing and reading" (p. 88).

Language competence has been measured in a variety of ways (C. Chomsky, 1969; N. Chomsky, 1965; Loban, 1963; Strickland, 1962). Generative language measured by the average number of words in a communication unit was found to increase with age, and to be a useful indicator of language maturity (Loban, 1963; Menuk, 1963). The work of Hunt (1964) built upon existing research and resulted in the development of a new technique, that of the use of the T-unit as a measure of language maturity. The research of Fox (1972) and O'Donnell, Griffin, and Norris (1967) verified the use of the T-unit as an adequate index of language maturity.

Learner variables, such as intellectual ability, self-concept, and socioeconomic status have often been associated with receptive language. However, research in reading and these learner variables has received the bulk of the attention. Usually, moderate-to-high correlations were reported (Bruininks and Lucker, 1970; Harris and Sipay, 1979; Purkey, 1970; Seitz, 1977). While growth can been seen in the volume of research in listening and these learner variables, such research has not kept pace with that related to reading (Marten, 1978).

From the available research, it can be seen that moderate-to-high correlations were usually found between listening and intelligence (Brown, 1971; Crowell and Au, 1979; Devine, 1978; Di Biasio, 1978). The research of

Abelson, Zigler, and De Blasi (1974), Bailey (1971), Feltman (1971), and Peskin (1973) reported listening skill to be influenced by socioeconomic status. There appeared to be no available research related to the receptive language mode of listening and self-concept, even though self-concept often has been associated highly with reading success (Purkey, 1970).

An additional learner variable, cognitive style, has been identified by theorists seeking to explain differences in the quality of cognitive products (Kagan, Rosman, Day, Albert, and Phillips, 1964; Kagan, 1965a, 1966, Kagan and Lapidus, 1978). Cognitive style includes the dimension impulsivity-reflectivity (I-R) (Davey, 1976). The relationship between reading and impulsivity-reflectivity has been the focus of a considerable body of research (Kagan, 1965a, 1965b; Massari and Shack, 1972, Readence and Baldwin, 1978; Shapiro, 1976). The findings reported by these investigators indicated that impulsive children generally made more errors while reading than did reflectives, and the impulsivity-reflectivity dimension was found to be an effective predictor of later reading achievement. However, other researchers, such as Becker (1976), Denny (1974), Hood and Kendell (1975), and Margolis, Peterson, and Leonard (1978), concluded that impulsivity-reflectivity did not significantly influence reading achievement. Findings of recent studies by Kennedy and Butter (1978) and Shapiro

(1976) investigating the relationship between listening and impulsivity-reflectivity indicated that this are might prove effective in screening out potential problem-readers.

In summary, the relationship of the receptive language mode of reading has often been the focus of research related to other language factors and to certain learner variables. Such was not the case with research related to listening and these learner variables. This study sought to investigate the relationships between these selected cognitive, affective, and sociological variables. Specifically, the investigation was undertaken to determine the relationship between generative language, intellectual ability, self-concept, impulsivity-reflectivity, and socioeconomic status to receptive language mode.

Method

Subjects

Patricipating in the investigation were 106 sixth-grade students from four classrooms in a small municipal school system. The school district included families from varied income levels, with 46% classified as low socio-economic status. School records indicated that 60% of the school population is black.

A measure of listening and reading comprehension was administered the total sixth-grade population of the school.

Students unable to complete the tests or who were absent on the three days on which the tests were administered were omitted from the sampling process. A measure for classification into impulsive or reflective categories, using the double median split procedure, further reduced the sample to 60 subjects.

Materials

Receptive language was measured by the paragraph comprehension sections of the Durrell Listening-Reading Series, Intermediate Level, Form DE (Durrell and Brassard, 1969). The Matching Familiar Figures Test (MFFT), Adolescent/Adult Set (Kagan, 1965,(c), was used to classify subjects as impulsive or reflective. Generative language samples were collected by using two large posters from the Peabody Language Development Kit, Level 3 (Dunn and Smith, 1966), to elicit both spoken and written language responses.

Each subject's score on the Short Form Test of Academic Aptitude (Sullivan, Clark, and Tiegs, 1970), was extracted from school records. Self-concept was measured by means of the Piers-Harris Children's Self Concept Scale (1969), entitled "The Way I Feel About Myself". Socioeconomic status was measured by means of the United States Department of Agriculture Family Size and Income Scale (1979) used by the school district to determine eligibility of pupils to participate in the free and reduced meal program.

Procedures

The receptive language measures were administered by the investigator in the regular classroom setting. The listening comprehension paragraph sections were pre-recorded on cassette tape to assure uniformity of presentation. Raw scores obtained from these measures were listed in ratio form, with the listening score serving as the numerator and the reading score as the denominator. When the mathematical procedure was completed, the score in decimal form indicated a subject's listening or reading dependency. Scores greater than 1 indicated listening dependency. Scores less than 1 expressed a reading dependency; a score of 1 indicated equal ability in each modality.

Students who completed the Durrell Listening-Reading Series were individually administered the Matching Familiar Figures Test (MFFT). This 12 item test yielded two scores, time (latency) and error. Time in seconds to first response was recorded for all 12 items and the mean obtained. Errors were summed across all 12 items, and the median established for both time and error scores. Subjects whose time scores fell below the median and whose error scores were above the median were classified as "impulsive." Subjects whose time scores were above the median and whose error scores were below the median were classified as "reflective." Students who fell into neither of these two extremes were excluded from the study.

Spoken and written generative language samples were individually collected as the investigator asked each subject to "tell me about the picture". A closed-end task was used following the method of Horowitz and Berkowitz (1967) in which subjects were told to say "I'm finished" when they had spoken or written all that they wished. Spoken responses were recorded on cassette tape for transcription and analysis. Written language samples were recorded on paper by subjects. The modified T-unit analysis described by Hunt (1964) was applied to each language sample. Mean T-unit length was computed for each sample, and each sample was submitted to a linguist for cross-validation as to scoring accuracy. The Piers-Harris Children's Self Concept Scale was administered in a small group setting.

Correlation and regression techniques were used to examine the data. Receptive language mode was utilized as the criterion variable in all the analyses. The .05 level of significance was used.

Results

The means and standard deviations for each of the variables are shown in Table 1. As can be seen, the mean for reading was higher than that of listening. The mean for listening-to-reading dependency indicated that the

TABLE 1

Means, Standard Deviations, and Intercorrelation Matrix for the Selected Predictor Variables and the Criterion Variable

	1	2	3	4	5	6	7	8	9	10	11
Means	27.88	31.20	.92	11.28	11.65	98.13	55.93	1.51	28.82	21.36	1.36
Standard deviations	8.31	9.83	.21	3.29	4.44	13.28	11.27	.49	26.91	10.90	.48

		1	2	3	4	5	6	7	8	9	10	11
1.	Listening	1.0000	.7684*	.1803	.1131	.0141	.6956*	.2015	.3473*	.3897*	-.3934*	.3134*
2.	Reading		1.0000	-.4689*	.1265	-.0764	.7728*	.2345	.2842*	.3436*	-.3453*	.2061
3.	Listening-to-reading ratio			1.0000	-.0611	.1250	-.2389	-.1209	.0354	.0205	.0009	.1092
4.	Spoken language				1.0000	.2475	.1933	.0226	-.0479	.0660	.0022	.0738
5.	Written language					1.0000	-.0651	-.1562	.1260	.0043	-.1024	.1073
6.	Intellectual ability						1.0000	.2263	.2257	.2150	-.3151*	.4012*
7.	Self-concept							1.0000	.0150	.0763	-.1360	.1027
8.	Impulsivity-reflectivity								1.0000	.6285*	-.8542*	.1130
9.	I-R time									1.0000	-.6685*	.0114
10.	I-R error										1.0000	-.1270
11.	Socioeconomic status											1.0000

*$p < .05$

subjects were reading dependent. The mean for written generative language was slightly higher than that for spoken language. and higher thar means reported by Hunt (1964) for eighth-grade subjects.

The mean for intellectual ability indicated that students were functioning in the normal range. Scores on self-concept considered to be within the normal range fall between 40 and 60. Subjects in this sample reported a high-normal mean score for self-concept.

The mean for impulsivity-reflectivity (I-R) classification indicated a tendency toward reflection. A score of 1 indicated classification as impulsive; a score of 2 represented a reflective classification. Means for both time (reported in seconds) and error were higher than those reported for the normative sample.

Classification into two socioeconomic categories was achieved by awarding a score of 1 if a subject was deprived and a score of 2 if a subject was non-deprived. The mean for socioeconomic status indicated that the sample was deprived.

Also shown is the correlation matrix which indicated significant relationships existed between each of the receptive language modes and many of the variables, resulting in further analyses. The regression analysis results with listening as the criterion were statistically significent: $R^2 = .55$, $F = 8.00$, $p < .05$. When reading was the criterion,

the results were again statistically significant: $R^2 = .64$, $F = 11.59$, $p < .05$. These results led the researcher to conclude that receptive language mode, as expressed as a listening-to-reading ratio score, did not adequately discriminate between subjects' receptive language dependency.

An unexpected finding was a nonsignificant relationship between receptive language and generative language, contrary to what was reported in the related literature. A possible explanation might be the brevity of the generative language samples collected. Means for written language exceeded those reported by Hunt (1964) for eighth-grade subjects on passages of 1000 words. Had closed-end tasks not been used, the language samples might have been of different length. Additionally, sample means on the measures of receptive language were markedly lower than were those reported for the norming population. Converting listening and reading means to grade equivalency provided a score of 3.4 and 4.8 for listening and reading, respectively. Actual grade placement at time of testing was 6.5, indicating that the sample was functioning below expected grade level in both listening and reading. These low receptive language scores coupled with higher-than-expected means on measures of generative language would tend to negate the positive relationship often reported by researchers investigating these language variables.

The significant relationship found between intellectual ability and the receptive language measures was as had been hypothesized, and confirmed findings reported in the literature review. Both measures of receptive language showed low positive correlations with classification as impulsive or reflective; the same was true of correlations between the MFFT time scores and listening and reading scores. A significant low negative correlation between listening and reading scores and MFFT error scores was found, with the correlation for listening ($r = -.39$) higher than that for reading ($r = -.34$). This finding was surprising in that the subjects were better readers than listeners and also had exhibited a tendency toward reflection. The investigator had theorized that a dependence on listening would preclude the opportunity for reflection, forcing an individual toward an impulsive tendency. Thus, it was expected that the higher negative relationship would exist between reading and MFFT error scores.

Inspection of the correlation matrix also revealed a significant low correlation between listening and socio-economic status (SES), as had been expected. The relationship between reading and SES was not significant, contrary to what had been expected from the literature review. The only other variable associated with SES was that of intellectual ability. It should be noted that the sample was classified as deprived on the measure of SES.

The correlation matrix provided additional insights into the relationships between classification of subjects as impulsive or reflective and the time and error scores used for classification. This study lent support to other research reports of a closer relationship existing between I-R classification and error ($r = -.85$) than I-R and time ($r = .62$).

As was expected, intellectual ability and I-R classification showed a low, nonsignificant correlation; the same was true of the relationship between intellectual ability and response time on the MFFT. However, MFFT error scores and intellectual ability showed a significant low, negative correlation, as had been reported in the literature.

An additional finding of the study was that reading comprehension exceeded listening comprehension at sixth-grade level and supported the earlier research of Durrell (1969).

Discussion

The strong relationship between listening and reading suggested that listening comprehension skills should be taught in conjunction with reading comprehension skills. Since more than half of the school day is spent in listening activities, planned instruction in listening skills might enable students at sixth-grade level to use listening time

more effectively. A wide range of materials is presently available from which activities for listening may be developed.

The low significant correlation between listening and SES suggested that this relationship might be taken advantage of by providing more opportunities to enhance listening skills of low SES children, giving them improved access to one form of receptive language, that of listening, as they work toward competence in the reading mode.

Because of the significant relationship between intellectual ability and listening and reading, it is suggested that consideration be given the use of flexible grouping procedures when planning instructional activities for students of varied intellectual ability.

References

Abelson, W.D., Zigler, E., & De Blasi, C.L. Effects of a four-year follow through program on economically disadvantaged children. Journal of Educational Psychology, 1974, 66, 756-771.

Bailey, D.S. Deprivation and achievement as factors in auditory comprehension. In Frank P. Green (Ed.), Reading: The right to participate. Twentieth Yearbook of the National Reading Conference, 1971.

Becker, L.D. Conceptual tempo and early detection of learning problems. Journal of Learning Disabilities, 1976, 9, 433-442.

Brown, C.T. Relationships among listening, reading, intelligence, and scholastic achievement. In S. Duker (Ed.), Listening: Readings (Vol. 2). Metucher, N.J.: Scarecrow Press, 1971.

Bruininks, R.H., & Lucker, W.G. Change and stability in correlations between intelligence and reading test scores among disadvantaged children. Journal of Reading Behavior, 1970, 2, 295-305.

Cazden, C.B. What we don't know about teaching the language arts. Phi Delta Kappan, 1980, 61, 595-596.

Chomsky, C. The acquisition of syntax in children from 5 to 10. Cambridge, Mass.: The MIT Press, 1969.

Chomsky, N. Aspects of the theory of syntax. Cambridge, Mass.: The MIT Press, 1965.

Crowell, D.C., & Au, K.H. Using a scale of questions to improve listening comprehension. Language Arts, 1979, 56, 38-43.

Davey, B. Cognitive style and reading achievement. Journal of Reading, 1976, 20, 113-120.

Denney, D.R. Relationship of three cognitive style dimensions of elementary reading abilities. Journal of Educational Psychology, 1974, 66, 702-209.

Devine, T.G. Listening: What do we know after fifty years of research and theorizing? Journal of Reading, 1978, 21, 296-304.

Di Biasio, M. The relationship of listening and reading in grades 2, 4, and 6 (Doctoral dissertation, Boston University, 1978). Dissertation Abstracts International, 1978, 39, 2739A-2740A. (University Microfilms No. 7819731).

Dunn, L.M., and Smith, J.O. Manual: Peabody language development kit, Level. Circle Pines, Minnesota: American Guidance Service, 1966.

Durrell, D.D. Listening comprehension versus reading comprehension. Journal of Reading, 1969, 12, 455-460.

Durrell, D.D., and Brassard, M.B. Manual: Durrell listening-reading series, intermediate level, form DE. New York: Harcourt, Brace and World, 1969.

Feltman, A.K. The effect of reinforcement on listening skills of culturally deprived school children. In S. Duker (Ed.), Listening: Readings (Vol. 2). Metuchen, N.J.: Scarecrow Press, 1971.

Fox, S.E. Syntactic maturity and vocabulary diversity in oral language of kindergarten and primary school children. Elementary English, 1972, 49, 489-496.

Harris, A.J., & Sipay, E.R. How to teach reading. New York: Longman, 1979.

Hood, J., & Kendall, J.R. A qualitative analysis of oral reading errors of reflective and impulsive second graders: A follow-up study. Journal of Reading Behavior, 1975, 7, 269-281.

Horowitz, M.W. and Berkowitz, A. Listening and reading, speaking and writing: An experimental investigation of differential acquisition and reproduction of memory. Perceptual and Motor Skills, 1967, 24, 207-215.

Hunt, K.W. Differences in grammatical structures written at three grade levels, the structure to be analyzed by transformational methods. (Florida State University) U.S. Office of Education Cooperative Research Project No. 1998, 1964.

Kagan, J. Impulsive and reflective children: Significance of conceptual tempo. In J.D. Krumboltz (Ed.), Learning and the educational process. Chicago: Rand-McNally, 1965. (a)

Kagan, J. Reflection-impulsivity and reading ability in primary grade children. Child Development, 1965, 36, 609-628. (b)

Kagan, J. Matching familiar figures test, Adolescent/adult set. Unpublished test, Harvard University, 1965. (c)

Kagan, J. Reflection-impulsivity: The generality and dynamics of conceptual tempo. Journal of Abnormal Psychology, 1966, 7, 17-24.

Kagan, J., & Lapidus, D.R. Infant antecedents of cognitive functioning: A longitudinal study. Child Development, 1978, 49, 1005-1023.

Kagan, J., Rosman, B.L., Day, D., Albert, J., & Phillips, W. Information processing in the child: Significance of analytic and reflective attitudes. Psychological Monographs, 1964, 78 (1, Whole No. 578).

Kennedy, C.B., & Butter, D.J. Cognitive style in two modalities: Vision and audition. Journal of Educational Psychology, 1978, 70, 193-199.

Loban, W. The language of elementary school children. Champaign, Ill.: National Council of Teachers of English Research Report No. 1, 1963.

Lundsteen, S. Listening: Its impact on reading and the other language arts. Urbana, Ill.: National Council of Teachers of English and ERIC Clearinghouse on the Teaching of English, 1971.

Margolis, H., Peterson, N., & Leonard, H.S. Conceptual tempo as a predictor of first-grade reading achievement. Journal of Reading, 1978, 10, 359-362.

Marten, M. Listening in review. In H.G. Shane & J. Walden (Eds.), Classroom relevant research in the language arts. Washington, D.C.: Association for Supervision and Curriculum Development, 1978.

Massari, D.J. & Shack, M.L. Discrimination learning by reflective and impulsive children as a function of reinforcement schedule. Developmental Psychology, 1972, 6, 183. (Abstract)

Menyuk, P. Syntactic structures in the language of children. Child Development, 1963, 34, 407-422.

O'Donnell, R.C., Griffin, W.J., & Norris, R.C. Syntax of kindergarten and elementary school children: A transformational analysis. National Council of Teachers of English Research Report No. 8. Champaign, Ill.: National Council of Teachers of English, 1967.

Peskin, M.E. Interaction of dialect, SES, and ethnicity upon listening and reading comprehension of fifth-graders (Doctoral dissertation, Rutgers University, 1973). Dissertation Abstracts International, 1974, 34, 4578A. (University Microfilms No. 73-32,232)

Piers, E.V. Manual: The Piers-Harris children's self-concept scale. Nashville, Tennessee: Counselor Recordings and Tests, 1969.

Purkey, W.W. Self concept and school achievement. Englewood Cliffs, N.J.: Prentice-Hall, 1970.

Readence, J.E., & Baldwin, R.S. The relationship of cognitive style to phonics instruction. Journal of Educational Research, 1978, 71, 44-52.

Ruddell, R.B. Reading-language instruction: Innovative practices. Englewood Cliffs, N.J.: Prentice-Hall, 1974.

Seitz, V. Social class and ethnic differences in learning to read. Newark, Del.: International Reading Association, 1977.

Shapiro, J.E. The relationship of conceptual tempo to readiness test performance. Journal of Reading Behavior, 1976, 8, 83-87.

Strickland, R.G. The language of elementary school children: Its relationship to the language of reading textbooks and the quality of reading of selected children. Bulletin of the School of Education, Indiana University, 1962.

Sullivan, E.T., Clark, W.W., and Tiegs, E.W. Technical report: Short form test of academic aptitude, Level 3. Monterey, California: California Test Bureau/McGraw-Hill, 1970.

U.S. Department of Agriculture. Family-size and income scale for free and reduced price meals. April, 1979.